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A SETBACK FOR THE WATERWAYS MOVEMENT

The waterways movement is at present meeting with serious opposition. A re-examination of certain projects heretofore generally regarded as feasible and for which federal appropriations have already been made has resulted recently in two reports by United States army engineers recommending the entire cessation of work on improvements already partly completed. Other similar reports are expected in the near future. The first of these adverse reports is for the Missouri River between Kansas City and St. Louis and the second for the Arkansas River in the state of Arkansas. The report of the district engineer in charge of the Missouri improvement, together with the public protests which the report has aroused, furnish material for an interesting chapter in the effort to restore water transportation in this country.

The improvement of the Missouri River was first recommended by the engineers of the War Department in 1905; then, after re-examination by a special board, again in 1910. Originally, a substantial depth was advocated, General Bixby urging a depth of 12 feet as far up the river as Sioux City, Iowa. A more conservative view prevailed, however, by 1912, when a Missouri River project was finally indorsed by Congress. The Rivers and Harbors act of July 25, 1912, provided for a 6-foot channel between Kansas City and St. Louis, the improvement to be completed in ten years at an estimated cost of \$20,000,000. To date Congress has appropriated the sum of \$7,250,000 of which over \$6,000,000 has been expended on the improvement.

The present controversy is the outgrowth of a provision in the River Improvement act of March 4, 1915.¹ Sec. 14 of this act provided "that the following projects now under improvement shall be re-examined . . . with a view to obtaining reports

¹ H.R. 20189, 63d Cong. 3d sess.

whether the adopted projects shall be modified or the improvement abandoned”:

Inland Waterway from Norfolk to Beaufort Inlet, North Carolina.

Cossa River, Georgia and Alabama.

St. Lucie Inlet, Florida.

Brazos River, Texas, from Old Washington to Waco.

Red River, Louisiana, Arkansas, Texas, and Oklahoma.

Ouachita River, Arkansas and Oklahoma.

Tennessee River, Tennessee, Alabama, and Kentucky.

Arkansas River, Arkansas.

Fox River, Wisconsin.

Missouri River, Missouri from Kansas City to mouth.

Under authority of this act Lieutenant-Colonel Deakyne, district engineer in charge of the Missouri improvement, reported on April 22 (made public August 4) that in his view all further improvement of the Missouri River except the removal of snags in the present channel should be given up and the engineering machinery transferred at once to other works. The chief points made in this important report may be briefly summarized as follows:

1. The improvement authorized in 1912 can be completed within the ten years allowed and at the cost of \$20,000,000 as originally estimated.

2. The annual cost of maintenance after the completion of the project will be \$500,000.

3. The annual interest charge at 3 per cent on the government's investment will be \$600,000, making in all a permanent annual charge of \$1,100,000.

4. The question of feasibility should be decided by a comparison of the cost involved with the benefits derived.

5. Protection of lands and amelioration of flood conditions are incidental benefits, but are not included in this analysis of benefits because they have not been recognized as proper objects of government expenditure on the Missouri.

6. The commerce to be considered is present and prospective. The traffic in 1913 was 37,551 tons, the total freight charge on which was about \$41,000. Since the water rates are 80 per cent of the published rail rates, the total saving to shippers was about \$10,000.

7. The prospective commerce may be judged by comparison with a river that has been improved, for example, the Mississippi between the mouth of the Missouri and the mouth of the Ohio. The navigable depth here has been 6 feet or more during the entire navigation season of recent years. The commerce in 1913 was 258,000 tons.

It should be noted that this stretch of river is so situated as to draw commerce from the improved stretches of the Mississippi above and below it as well as from the Ohio and the Missouri. It seems to me doubtful whether the Missouri with the same depth will carry any more. The Missouri River traffic would have to increase seven fold to equal that on the above section of the Mississippi, and would have to increase a hundred fold to reach a figure commensurate with the cost of the work.

8. The potential competition forcing down rail rates might be considered an important point were it not for the fact that we have another means, in the Interstate Commerce Commission, of forcing down rail rates if they are too high.

9. The territory to be served is not in need of additional transportation facilities, since the river is paralleled for a great part of the distance by railroads on both banks.

The publication of this report caused a tremendous commotion in the Missouri Valley. The Commerical Club of Kansas City immediately sent telegrams to waterway supporters in all the principal cities in the Missouri and Mississippi valleys, to many of the congressmen in the states concerned, and to the officers and directors of the National Rivers and Harbors Congress at Washington, calling a great conference at Kansas City for August 17. This conference was attended by over 200 delegates representing 10 states and 48 cities. It was decided to make the fight for the Missouri a national fight, owing to the belief that the abandonment of this project would mean a serious defeat for waterway interests everywhere. It was charged that this unfavorable report was a part of a great conspiracy to prevent any further waterway improvements for the benefit of the railroads. An official protest was drawn up for submission to the permanent Board of Engineers for Rivers and Harbors at Washington. Separate protests were also sent by the individual commercial clubs and other interested

associations of the entire valley. These protests were accompanied by a request for a public hearing before the Board to be held at Kansas City on October 19. The request was of course granted.

These hearings were continued for two days. A carefully arranged program had been prepared and testimony was submitted by scores of interested shippers and organizations from Chicago to Omaha and from there to New Orleans. The Kansas City interests submitted a comprehensive report of nearly two hundred pages setting forth in full the arguments and data in support of the improvement. The purpose of the testimony was to convince the Board of Engineers that the people of the valley are tremendously interested in river navigation and that if given half a chance they will "swamp the boat line" with freight, and that river navigation, and consequent cheap rates, are absolutely essential to the continuance of manufacturing industry in this section of the country. The highest estimates of traffic reached a total of 800,000 tons annually when the depth of 6 feet throughout the navigation season is provided.

There was a general feeling among the waterway adherents present at the hearings that the army board will probably uphold the Deakayne report, but that upon appeal to Congress authorization for the completion of the improvement will readily be obtained. I am assured that every congressman in the entire Mississippi-Missouri Valley is lined up in favor of the project. It is quite possible, however, that a victory in Congress will not be easy at this time. The growing sentiment against pork-barrel appropriations, and the depleted condition of the national Treasury and the unusually pressing need for funds for other purposes impose serious obstacles to an appropriation that is condemned by the Board of Engineers for Rivers and Harbors. There appears to be evidence, indeed, in the terms of the River Improvement act of March 4 calling for these re-examinations of certain projects, of a real change of front with reference to waterway expenditures on the part of the administration.

With this general survey of the situation before us, we may now turn to an analysis of the merits of the Missouri River project.

The economic aspects of the question are discussed to some extent in the Deakyne report, and the conclusion that the project is not feasible appears fully justified from the data there presented. A most thoroughgoing analysis of the problems seems warranted, however, in view of the far-reaching effects of either victory or defeat for this project on the waterways movement as a whole.

The main reliance for traffic on the Missouri must be manufactured commodities. It is true everywhere that agricultural produce, except under special conditions, cannot be shipped by water on account of the cost of transshipping from the railroads. This appears to be recognized in Missouri, for the only farm produce mentioned as available for shipment by boat is that grown in the bottom lands along the river. There are no deposits of coal or ore along the river which can give rise to an enormous tonnage in bulky freight, generally conceded to be best adapted to the conditions of water transport. Accordingly, the success of the project is contingent almost wholly upon the savings that may be effected in the carrying of manufactured goods.

It is to be observed in this connection that there is not a single river in the world that has developed a really extensive commerce in manufactures. In Europe where governmental control of rates can definitely direct the shipping of goods by rail or water as is deemed best, it is everywhere recognized that water transportation is adapted in the main only to heavy, bulky raw materials. Not over 5 or 10 per cent of the traffic at best is in manufactured goods. It is of interest to note, also, that the only river in the United States that has had any considerable traffic in recent years is the Ohio and that this has been mainly in coal originating along its tributaries in Pennsylvania.

Turning now to the actual estimates of traffic that have been made, the shipping interests assured the army board that at least 800,000 tons annually would eventually be shipped if the river were given a depth of 6 feet. This figure is arrived at in different ways. Over 700,000 tons have (supposedly) been pledged by Kansas City shippers. In the list making up this total, however, is a single item by a single company for 100,000 tons of hay. A second means of arriving at the probable tonnage employed by the Kansas

City interests is to assume that the river will get 10 per cent of the total traffic moving between Kansas City and St. Louis, the total being 8,000,000 tons annually. The St. Louis interests, however, presented figures showing that the total traffic of the region is about 3,000,000 tons; and they assume that the river will secure 40 per cent of this, or 800,000 tons. It should be recalled that Colonel Deakyne's estimate is a maximum of 258,000 tons.

As a matter of fact, 3,000,000 tons measured the total traffic between Kansas City and St. Louis in both directions during the past fiscal year. Colonel Deakyne's figures of \$500,000 maintenance and \$600,000 interest may be taken as a current basis for considering the economic feasibility of the project. The saving in 1913 was about \$10,000 on a traffic of 37,551 tons. At the same rate, the saving on 800,000 tons would be only about \$200,000 annually. To save \$1,100,000, the amount of the annual maintenance and interest charges, would require more than 4,000,000 tons, or one-third more than the entire traffic passing between Kansas City and St. Louis. Thus, at the present water rates, even if the waterway should succeed in taking all the traffic away from the railroads it would still be insufficient to meet the annual charges incurred by the government.

But, the question may be raised, would not the development of an extensive traffic permit much lower water rates than those quoted at present, and hence effect the saving necessary to render the project feasible? A study of the present costs by rail and water will answer this query. The traffic on the river at present is carried mainly by the Kansas City Missouri River Navigation Company, which was organized three years ago in Kansas City. It has a capital stock of \$1,200,000 of which over \$1,000,000 has been paid in and \$750,000 expended. It has 15 vessels of up-to-date design, some of them with a carrying capacity up to 600 tons. Evidence submitted indicated that the company has been efficiently handled, that it has enjoyed a fairly steady patronage, and that the present obstacles in the way of navigation on the river are not serious except at certain seasons. The rates quoted by the company are 20 per cent less than the published rail rates, and the water rates provide for delivery to elevators or on board cars,

including a certain maximum for absorption of switching at Kansas City. Up to date, however, these rates have not proved adequate to cover running expenses. In 1912 the operating deficit was \$37,000; in 1913, \$42,000; and in 1914, \$40,000. There is certain to be a substantial deficit this year even though the traffic has been larger than heretofore and the conditions of navigation much improved. These deficits were incurred in the moving of less than 30,000 tons of freight. The actual rates charged average about \$1.10 a ton. To cover this operating deficit, with the present traffic, would require therefore, more than double the present rates, or approximately \$2.25 per ton. The present rail rates are around \$1.30 per ton, that is, 20 per cent above the quoted water rates.

But this is not the whole story. The deficits noted above are operating deficits only, that is, they are exclusive of interest and profit on the capital invested in the boat company. At 6 per cent on the \$1,000,000 of paid-up capital the deficit on this account amounts to \$60,000 per year. This is in itself a charge against the present traffic of more than \$2.00 a ton. In addition to these indirect charges are others due to expenditures for terminal facilities at shipping-points all along the river. It is apparent, therefore, that at present the inclusive cost of transportation on the river is something like \$4.25 per ton, exclusive of all government expenses for maintenance and interest charges.¹ The present rail rates are only about one-third this amount. It appears altogether improbable in view of these figures that even with a traffic of 800,000 tons a year these inclusive charges could be reduced below the present rail rates. In fact, the manager of the boat company does not state that more than the operating deficit can be eliminated.

It is a commentary on the business acumen of the shipping interests of the Missouri Valley that they fail to see this situation in its true light. One can understand why they should feel that any outlays of the federal government in improving the river should not be considered in counting the cost, but it is difficult to see why

¹ The \$1,100,000 annual maintenance charges of the government apportioned over the present traffic of 37,000 tons equals \$30.00 a ton; if 800,000 tons should be developed the charge on this account would be about \$1.30, or approximately that of the present inclusive rail rates. If Colonel Deakyn's estimate of 258,000 tons prove correct this charge would be over \$4.00 per ton.

they should fail to include as a necessary charge against the traffic shipped by water a return on their own capital investment in the boat company. The only explanation seems to be that the prevalent hostility to certain railroad practices coupled with the waterway sentiment that has been developed by years of incessant agitation has for the present suspended in this connection the usual standard of business sense in the community.

With reference to aid from the federal government in the improvement of the river itself, the people of Kansas City feel that they are entitled to it even if the traffic is not adequate to cover the government's outlays. They insist that the (nominal) reduction in freight rates of 20 per cent measures the difference between success and ruin for the manufacturing interests of the valley. They feel that the opening of the Panama canal and the consequent lowering of transcontinental rail rates has placed this interior region at a serious disadvantage from which escape can be had only by means of low water rates. They insist that it is the duty of the government to give them this aid, since it was the government's action which placed them in this present unfavorable position. Without undertaking a discussion of the problems of national policy here raised, it may be observed that the notion that if the federal government improves this waterway it costs the shippers along the Missouri nothing, is quite erroneous. The waterway advocates are disposed, as already indicated, to make the Missouri River fight a general waterways fight. Thus while the rest of the country, through federal taxation, is supporting the Missouri River improvement, the people of Missouri will in turn be contributing to the support of waterways in North Carolina, Texas, California, and elsewhere, and thus in the end be really paying in the main for their own waterway. There is of course some chance of gain here at the expense of other sections, but in view of the well-known compensatory system whereby the regions that have no waterways to improve procure post-offices and other public buildings instead, the balance is fairly well maintained. It is to be observed, however, that shippers, as distinguished from the rest of the community, may reap an advantage in view of the fact that federal taxes fall on shippers and non-shippers alike.

Another question closely related to the one we have just been discussing is the probable effect of a diversion of traffic from the railroads to the river upon rail rates and upon the cost of transportation as a whole. The shippers of Kansas City argue that the opening of the Panama Canal has compelled the railroads to lower their transcontinental freight charges and that they will endeavor to recoup their losses by raising interior rates.¹ Accordingly a resort to the river appears to them imperative. But will the diversion of traffic to the river on the whole give relief? There appears to be no good reason why the railroads could not do in this case quite as well as in the case of the transcontinental traffic—make good the loss of revenue by raising the rates on other freight, on such as is not adapted to water transportation, or even by raising passenger rates.² The alternative is for the railroad to pocket the losses so far as this diversion of traffic is concerned. With reference to this possibility it is important to recall that the government has of late been recognizing that railroads are entitled to remunerative rates for the business as a whole, and that it is not improbable that the roads of this region would have to be permitted a horizontal increase in rates in the event of a considerable diversion of traffic to the river. Some of the railways in this section are fairly prosperous, but others are on the rocks.

A final problem with reference to the improvement of the Missouri River is that of conservation. While the appropriation for deepening the river was authorized with transportation primarily, if not solely, in mind, now that the adherents of the project have been placed on the defensive they are endeavoring to make much of the incidental benefits from the prevention of floods and the reclamation of bottom lands. The engineers admit that a depth of 6 feet would be of some service in controlling the flow of the river. It ought to be clear, however, from the foregoing

¹ No evidence is given to show that the rates of the Missouri Valley region have in fact been raised as yet.

² The writer does not believe that the current notion that the railroads can easily recoup losses at one point by raising rates elsewhere is in general sound. The rates elsewhere are already likely to be adjusted in most cases at the point of maximum returns. But if the argument discussed above holds true in one case it would as likely prove true in the other.

analysis of the transportation aspects of the problem that rivers like the Missouri should be considered primarily from the standpoint of flood prevention rather than from that of navigation. The advocates of waterways practically always put transportation first and reclamation of riparian lands as secondary or incidental benefits. Placing the strictly conservation aspects of the problem of river improvements first and transportation as incidental would usually secure much better results. It is perhaps needless to add that when flood control is the main consideration, the problems of engineering involved may be radically different from those where improvement of navigation is the chief end in view.

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